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# Brief Sketches on Inflammation.

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Ut desint vires; Tamen est laudanda voluntas.

Wm. A. R. G.

N. C. Hancock

Massachusetts.



Dilectissimo Carissimoque Patri

Re tot tantisque insignis beneficiis nunquam memoriam habere.

Ut publicum grati animi, per quod testimonium. Hoc  
salutem medicum deat vobis et consecrat

Pius Filius.

Illustrissimo Præstantissimoque viro

Thanno Philippo Sellsten

Professori Dignissimo, Francorum Imperatoris Chirurgo  
consultanti, Epist. Gallie imperii Institut. Medici Regionis  
honoris, Nosocomii vultu dicto Hotel Dieu Institut. Parisiorum  
Chirurgia primario, nec non eundem vultu celebrissima facultatis  
medicæ clinice vultu professori, Academia imperialis  
Josephina Viennæ austriæ socio honorario, professorum facultatis  
medicæ parisiensis societatis &c. &c. vultu tot præclaris solidis ornato  
vultu que honoribus decorato, Præcepti meo plurimum calendo

Teque patris mei, erga me caritatis amulit, tua cura, tua  
diligentia, innovata que munificencia, mihi in arte medendi viam  
aperuisti, benignus accipere hoc salutem medicum (quidem indigni  
professore meo magno) quod deo, vero, et consociis tibi in signum

gratissimi animi Obsequentiſſimus tuus alumnus —

An non Celeberrimo Doctissimo que amico

Guillelmo Dupuytren

In Parisi celeberrima Facult. Chirurg. Prof. & Medicinæ  
Dato Habiſſimi Chirurgi apud me primo, socii plurimum

Indulgentiſſima factus hoc opusculum parvum tibi dicere  
posui non dubito. Indignum est quidem attentionem tua  
time, et tamen illud tanquam civitatis hoc pignus acceptum  
confido. Vale.

Affectione

Thibault Joseph Roux

Chirurg. prof. Socii plurimum. sed & Medicinæ valde dato  
Chariti Chirurgi adf. habet.

Tanquam amicitie testimonium hoc hanc partem  
Nepotolumiam tibi obsequium vix dico.

Thibault Roux.

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## Brief Sketches on Inflammation

I select for my dissertation, a subject, acknowledged  
difficult, which has been explored by the ablest physiologists  
of the age; to be presented to the Philadelphia School,  
may trace an unobscured course, — when I may not in-  
dulge the hope, that my elaborate the feeble sketches,  
which, at other times, in other places, and before other  
men, might have been received as plausible, cogent or  
even unimpeachable, may not here, be deemed sufficiently co-  
herent, as to acquit me of the charge of presumption,  
— when the language, in which I have to offer my  
reflections, being, by a ten years residence in a foreign  
country, (at an age which is not that of fixists) almost  
obliterated, and when the least imperfect of these obser-  
vations have been matured in the short time I had  
the honor of being committed into your school, by your  
Learning, your Experience, your lucid demonstration,  
and above all, by that uniform kindness, so well cal-  
culated to excite inquiry and draw forth latent instruction

Yet, when I look back and consider my  
 very scanty stock of medical instruction, the sit-  
 uation in which I was, for some years, which commanded  
 an equal share of labour and attention on all  
 parts, a situation better calculated to retard than  
 to promote the progress of science than to learn how to dissect and  
 I found that Inflammation, in its various stages  
 has perhaps engaged as much of my attention as  
 other part of my medical studies - But I do  
 not need excuse for the choice of my subject, nor  
 may I not need for the manner in which I have  
 found to have treated it! - Here indeed, I  
 attempt to acknowledge the charge of presumption  
 and leave myself on the mercy of my judges! - I  
 do not entirely despair - I had not little use  
 of time and of power - Such a subject cannot  
 admit of results - If I should be found equal  
 feeble in these! I will say; that labour was  
 encroached on the time allotted to reflection -

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I candidly confess, I feel unequal to the task of  
even reserecting the mass of crass materials with which  
my mind has, for some time been filled, and which  
was in some degree, familiar to me. — But after all  
the apologies I can make, my judges know that  
mine is not the age of imitation; and I confidently  
rely on their indulgence. Ut desint vires, tamen est  
laudanda voluntas.

# Inflammation

Inflammation may be defined, an exhalation, in greater or less degree, variously maintained, of the vires vitales, in any part of the animal economy, accompanied by more or less irregularity, in the circulation of the capillary vessels, which are invariably the seat of inflammation. This appears evident from the vitality with which these vessels are invested, from the particular phenomena of circulation, and from the symptoms, accompanying inflammatory diseases. Hence we observe, that the greater the development of capillary vessels, in a part, the more liable it is to inflammation; the blood arriving into it in large quantity.

The two extreme degrees of this disposition are illustrated, the one, by the intensity and frequency of the disease, the other, by its infrequency and



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and the slowness of its progress. As pain or red-  
ness does not always appear, as I hope to be able  
to prove by and by, all local excitement of the  
organic movement, to a degree sufficient to pro-  
duce a disorder or derange the harmony of the  
functions of human economy; or to disorganise  
the tissue which is its seat, may be considered, as  
an inflammation. Hence we may conclude, with  
Galen, that inflammation is not an unnatural  
phenomenon: *non contra, sed prout naturam*.

In Boerhaave's time, the intimate composi-  
tion <sup>of the blood</sup> was yet unknown. It was thought to be for-  
med of various globules, of various shapes, sizes  
and colour: certain vessels admitted, some the red  
some the yellow, other the white &c. In order  
that circulation should be carried on, in its natural  
way, it was necessary, that a relation should  
exist between the vessels and the globules, which  
were to be admitted. Any cause stopping their reac-  
tion, necessarily forced them into vessels of a dif-  
ferent order, and produced what was called obstruc-  
tion, which caused inflammation. Hence it

was thought, that no inflammation could take place without obstruction, to which they had also given the appellation of læsis loci, an expression since become famous, in the medical world.

By the aid of this theory, the followers of this celebrated professor has explained all the phenomena of disease. Fever was produced by a slower motion of the blood, caused by a stagnation, which gradually ran through the vessels till it reached the heart, which afterwards, reacting on the whole mass of the blood, produced the excitement, constituting fever. This idea was that, after finishing their distribution, the arteries were divided into smaller & even capillary vessels, which admitted the globules in the above mentioned manner.

This theory it must be confessed, presents a fascinating aspect: but when attentively viewed, and afterwards compared with the

phenomena

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theories of the great men <sup>who came after</sup> we are irresistibly  
convinced of its falsity.

Lavoisier was the first who discovered its want  
of solidity. Berzelius came after him, and several  
other distinguished members of the once famous  
University of Uppsala greatly contribu-  
ted to check its progress, by demonstrating its  
fallacy. But their imbibing so great a share  
of the Stahlian principles, remains a cause of  
great regret, among learned contemporaries.

The arguments produced against the doctrine of  
the Lyden Professor were numerous; but, in  
the present state of physiological progress, it would  
be equally useless and ineffectual in me to enumerate  
them; suffice it to observe, that an inadequate idea  
of the importance of the vis vitalis was the greatest  
obstacle to the perfection of Boerhaave's system.  
Not many years since, an other opinion was pro-  
duced, by a great and ingenious Physiologist, too  
little known, in the English schools viz Lazzar

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pretended, that, by titillation, and irritation, the  
nerves acted too great a part, not to be principally  
concerned in inflammation. Perhaps the opinion of  
this great <sup>man</sup> was true principally to the time in which  
he flourished, where every phenomenon in animal  
and organic life, was to be accounted for, through  
the medium of the nerves.

Reg. D. altho, however, whether from his great  
talents, his great reputation or his great candor,  
obtained a number of followers and disciples.  
But his opinion is now exploded; some parts of  
the human body in which nerves were never in-  
cluded, being susceptible of inflammation, such  
as bones & cartilages; and some parts which are in-  
sensible, when in flame, being very little so, when  
in a healthy state. However this last opinion  
has also been exaggerated. Thus excruciating pains,  
and even diseases have <sup>been</sup> attributed to the pervasion

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of a membranous or a tendinous part: The swelling  
of the arm was thought to be caused by the pressure  
of the fascia, moved by the tension in blowing;  
and it is almost known to be produced by the  
pressure of some of the fibrilla of the internal  
cutaneous nerves. Similar affections, caused by the  
pressure of a nerve, arose upon its complete section.  
The tetanos was thought to be produced by the pres-  
sure of a tendon; but this is not confirmed by  
Pezet's experiment. Several cases in a variety of  
ways in the tendons of living animals, did not seem  
to cause the rust pains though, when the tendons  
were incised the animal manifested some morbid  
way; usually trembling, and about the expiration  
into I always found the same result.

A greater stimulus which, for some time, prevailed  
in our circles, was the idea that the brain contained  
a preëstablished cause of inflammation, so, that  
it was more tendinous resistant to disease. It  
is

is a well known fact, that the blood, drawn from the vein of a man, containing some inflammatory disease, was thick buffy coat. But De Bown is this, and ascribed it to other causes. Henslow thought the thickening of the blood, out of the veins, indicated the greater fluidity in that, left in the vein. I trust a little reflection will be sufficient to convince the physician, that the veins contain a morbid habitual indurification.

Some authors have pretended that, coagulable lymph acts a part in inflammation; and this opinion was principally propagated, by the English physiologists of the time of which see John Hunter. Thus far from the opinions which have long prevailed in our schools.

Almost every part of the human body may be the seat of inflammation, in a greater or less degree, but those which have received from nature, the greatest immobility are indeed the most liable to it. The skin, the cellular substance the serous and mucous membranes are in this case. The skin, the cellular substance

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the whole surface of the mucous membranes are also the seat of a secretion performed by the Lymphatics, a fact which disposes them to inflammation. The skin is also the seat of an exhalation and of absorption. I add that, when a part has once been the seat of inflammation it is, by this very fact, disposed to it a second time. This is rendered most obvious in the serous membranes.

As inflammation goes through its different stages, with more or less rapidity, according to the degree of activity of the vis vitalis of the part, where it is initiated, it seems improper to divide it, into acute and chronic, for it has a limited time in each organ. In those moved with great energy, from the vis vitalis, it will go through its different stages with rapidity: on the contrary in those, which possess this principle in a small degree, it will be slow in its progress.

CAUSES. It is more important to know the general than the particular causes of inflammation:

They may be divided into proximate and mediating, and are very numerous.

The most important is the violation of continuity. Punctures and lacerations, which have resisted all other

causes, under a great variety of forms, and at (x) any  
 recidity yield to the solution of continuity. In solid matter,  
 it, nature or art would be deprived of its spontaneous  
 vium, by which causes are cured. The transition, from  
 a hot to a cold temperature, by stopping the motion of  
 the skin and membranes; - the introduction of acids  
 - fluids, into the stomach; - irritation of all kinds;  
 Baigun applies externally, or internally. (x)

Predisposing Causes - Several causes also pre-  
 dispose to inflammation, such as the period of menstru-  
 tion, (and of its first eruption) of gestation and of  
 degeneration of this monthly evacuation, the summer  
 heat, &c. and exercise. Those who live on animal food  
 are more liable to inflammation than those who live on  
 vegetables; - as *Salu la dit*. *to hit* or share diet, or on  
 substances less often found to digest in caecities. The  
 Chinese of the Indians that a few days, before a war

\* Bacon relates, that the Chinese, being  
 on a high mountain, the soldiers drank cold  
 new-water; and that so violent an inflammation arose  
 by gangrene and puerperia in the loins took place in a  
 short time after, that it was with the greatest difficulty  
 saved their lives.



is to begin; these children of nature and of abstinence  
abstain from all food, a precaution at times worthy of  
the wisest and most courageous people and which, while  
it shows their courage and intrepidity, especially when  
contrasted with the practice of their present allies, shows  
this courage to be driven by excellence, if I may be  
allowed the expression. It is added that their wounds  
are much more easily healed than those of civilized  
nations. We seldom perform a surgical operation, without  
making by a few days preparation reduce the flesh of  
the patient, by an abstinence and low diet.

Inflammation has other ~~causes~~ predisposing causes;  
— as sanguine constitution, youth, plethora & phantasia  
tion, hot and dry, or cold and dry weather. the begin-  
ning of spring. dwelling in high situations, exposed to  
the North. the use of too hot baths, the abuse of  
wine, and spirituous liquors, suppression of usual  
venereal discharges, strong passions indulged to excess, fits  
of anger, sudden transitions from active to sedentary &  
indolent life, and the use of high-seasoned and succulent  
food. Some authors have thought fit to add an  
inflammation

inflammatory temperament, as Professor Roux of Paris admits, of an excretitious temperament: all these may be considered as exposed to violent inflammation; and we may add that, generally speaking, it may proceed from the most accidental causes.

Division of inflammation. The late progress made in the science of anatomy has greatly contributed to a knowledge of the various stages of inflammation.

It has been divided into excretitious and stigmas, though this division may not be founded in truth. It has also been distributed into acute and chronic. To prove that two types of inflammation is peculiar to the organ in which it is seated, is to prove this distribution is erroneous.

Some species of inflammation have a great tendency to vary their seat, from one place to another. Thus we find the inflammation of the skin which commonly occupies a large extent, and, according to the different parts of the surface of the whole body to this sort of inflammation, authors have granted

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name of Erysipelas. The skin is not swelled, neither has it any tendency to suppurate. When the cellular membrane is affected, with inflammation, it is limited and has no tendency to propagate itself, but its progress among a resolution are easily discernible.

Inflammation may be considered, according to the causes that produce it, as being of three different kinds, viz  
1<sup>st</sup> Sympathetic or essential, as when inflammation is limited to the part, where it has its seat, and where the cause is acting.

2<sup>d</sup> Sympathetic, or by consent of parts; as when it arises in a part, so distant from any diseased part, that it can only be explained by sympathy. Thus Erysipelas depends upon a foul state of the stomach, and is most commonly removed by vomiting and purging, without any topical application; which are most commonly useless and even dangerous. The inflammation of the Sclerotica sometimes depends upon oculo-rhagies; it is thus indirectly caused by the sympathy of the mucous membrane, lining the nostrils with the sclerotica.

It is also has been caused, by the introduction of poisons  
nares

poisonous substances into the stomach.

By Sympathy, I mean the extraordinary or vicarious development of the vitality in a part, which is acted upon, by another, to which a direct stimulus is not applied.

3<sup>d</sup> Symptomatic inflammation, which happens, when an organ is diseased.

Phenomena of inflammation. The phenomena of inflammation are of two kinds, local and general.

The general depends upon the influence which the diseased part has on the system.

The local are divided into proper and accidental to the part affected;

and of continuity and contiguity.

They appear in the vicinity of parts, affected with morbid action.

Common phenomena need no explanation.

Symptoms. Authors have described the phenomena of heat, redness, pain and tumefaction as symptoms of inflammation. To these, I have added the disorder produced in the part or organ affected. The whole system is, often a species of

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of ways I will attempt an explanation of those phenomena.

Redness in the part is occasioned by a greater quantity of blood in its ordinary vessels, or by the admission of blood into those vessels which, in their natural state, did not admit any. "The colour of an inflamed part," says John Hunter "is visibly removed from the natural, and assumes a new red." This colour is of various hues according to the degree of the inflammation and constitution of the patient. Sometimes it is of a pale red, and others darker, and of a livid red, and sometimes various colours. The nearer the seat of the disease is to the centre of circulation, the less or than sooner situated far from it. This red colour is gradually lost in the surrounding parts, but sometimes there will be a determinate edge."

Several cutaneous inflammations may serve to illustrate his observation.

Therefore it is caused by the accumulation of blood in the part, (but without obstruction) producing a plet up in the blood vessels. When the cellular membrane is inflamed we observe a communication with the skin

rance

appearance of a variety of parts. It is most always  
proportional to the variety of the part affected. Thus  
when the membrane is so situated that the part exposed of  
the gender transpiration by inflammation; as this trans-  
piration may be more to the accumulation of other  
fluids in any part of the body. The skin has a great  
tendency to accumulate in those parts of the cutaneous ma-  
nifestation are said of parts, because the parts are  
more the eye sees, and that concerning the function.

That is accounted for: and, as the skin has a great  
tendency, it is not surprising that the cause which the  
is not that of it. Since we find that although the  
in the intestine, yet if any one of the parts is  
inflammation is a sign to be in it. The  
of the inflammation in the intestine, as well as  
from the head.

It is more likely to vary in its nature than  
of the above mentioned phenomena, it being more  
in proportion to the importance of the  
affection. The skin is a great part of the  
of the skin of the skin: the skin attending, consequently

is burning, as a rent; that comes by Phlogiston pain  
the pain attending an inflammation of the membrane  
fringed. But whatever be the nature of pain its in-  
tensity is in proportion to the degree of the great affec-  
tion in as much as it presents itself. The  
pain in inflammation is attended by an excruciating  
pain: the close texture of the part, by increasing a compres-  
sion of the nerves, causes it: and agreeably to this, respec-  
tive medicinal applications, by relaxing, or  
the reverse of the part, allay the pain, and check  
the further progress of the disease.

Pain cannot exist in the human economy, without  
being a disorder of its functions, and sometimes death.  
The degree of prostration to the importance of the great  
signs with it, as the degree of the economy is in propor-  
tion to the degree of the part affected:

It is more violent, has an end in view, when she smites  
down: so we find, that where else is absent, the disease  
cannot commonly survive as physicians say: That practice  
however, in relation to pain, is often dangerous. It  
means

side of compression of the nerves of the thigh; during the  
performing of a grave surgical operation, has often been  
practised, in which the pain was often well suppressed;  
and the disorder of the economy which ensued when the  
compressions was removed was such, as often to produce  
death.

That a considerable disorder of the functions in the heart  
takes place, cannot be doubted; when we observe that  
the exhalation of the serous membranes is changed; that  
a flux of a different kind is formed; that when there  
is the least inflammation it is no longer capable of  
transpiration; and that the secretion of the mucous mem-  
branes is also altered. It is to be regretted, that in such  
cases more attention is paid to the secretion than to the action  
of the diseased part.

Schneidman

Suppuration has also its proper phenomena:—There is  
the swelling of the peritoneal membrane, or large  
constriction of the bowels: the swelling of the larynx causes  
a difficulty of swallowing, that of the prostate glands  
of voiding urine, and that of the mucous membrane of the  
urethra, strictures. The whole danger of a disease of the



depends on the swelling.

A knowledge of the Phenomena of the continuity of parts is very important. This implies the identity continuity of parts of the same structure. It is by this phenomenon of continuity that we explain the various states of the tongue, in the different diseases. Irritation, produced on one portion of the intestinal canal, extends its effects on a distant portion. But continuity may take place through the medium of the cellular membrane, as in the membranes of the Stomach, where this continuity is the cause of various phenomena in inflammation. It does not seem, from what I have been able to find or author, that the ancients paid any attention to continuity.

An inflamed part often requires an influence, or some of the surrounding ones, to which it communicates its own irritation, whether they be united by a perfect continuity, or which would admit an identity of structure, or only by means of the cellular substance, nerves and vessels.

This sort of inflammation is what is properly termed inflammation by continuity, & so common an occurrence in the human economy. Thus Erysipelas or swelling of the skin.

This disease which usually originates in the cellular



contiguous loit, with which it is in some ways connected or joined has ceased the distinction of inflammation by contiguity.

The cellular substance which is found between one organ and another, would seem as Dickson observes, to be an obstacle to the propagation of a disease, from one part to another. It frequently happens; but on the other hand, we as frequently observe the contrary. The difference of vitality of the parts, seems a sufficient cause to prevent the propagation of disease by contiguity. The cellular substance and the fat with which it is filled, covering most parts of the human body, separates them from the surrounding ones, in such a manner, as often to stop the propagation of disease by contiguity. Thus we often find a joint diseased; coarctation of the aorta or tertiary syphilis; long in consumptive patients, an inflamed peritoneum covering a healthy stomach, liver or spleen; the subcutaneous parts, infect strangers to the eruptive diseases, under which the skin is covered; tumours existing in the interior of organs, unaffected by them, the <sup>serous</sup> arachnoid.

in a state of suppuration, covering the arms in many  
 affected by it. All this is evidently produced, by the  
 difference of vitality of those parts, for when a  
 part is continued into another, it communicates its  
 diseases to it, with more ease, than when separated  
 from it, by the cellular membrane: thus the diseases  
 of the periosteum are communicated to the bones, and  
 those of the bones, to the periosteum, thereby a  
 direct communication, between these parts, and  
 as no intervening cellular substance. However,  
 my great ~~conviction~~ <sup>confidence</sup> in this opinion,  
 may subject us to the admission of too many <sup>reasons</sup>  
 reasons: it so often happens, that conclusions, from  
 the anatomy of a part, are contradicted by the  
 clinical observations. This is actually the case, the  
 cellular substance, far from being in all cases an  
 obstacle to the communication of a disease, from one  
 to another often helps its propagation, or pro-  
 -pagation, making the resistance of one part

being active, also alters that of another by contact  
 & through the medium of the cellular Substance.  
 This should not be mistaken for Sympathy; one  
 part being diseased, communicates its affection  
 to another, although the intermediary one be in a  
 healthy state, yet no Sympathy.

The Phenomena of contag, it's, shew that it is  
 not always necessary for both parts to be primi-  
 tively diseased. in order to contract vs. lesion. Thus  
 in the vicinia of the intestine, in the operation for  
 the Strangulated Hernia and in wounds of those  
 parts, the inflamed peritoneum coating the  
 intestine, soon communicates its inflammation to  
 the sound peritoneum, lining the abdomen, and  
 it thereby acquires all that is necessary, to coarctate  
 on occasion, which soon takes place. all this may  
 be applied to the pleura &c.

Many conjectures must have arisen on the pheno-  
 mena of continuity & contiguity: the phlegmasia  
 of the

of the membranes derive a recent discovery. The inflammation of the peritonaeum, first ascribed by Johnston, in 1479. and afterwards, by Wall, a Russian anatomist, and since brought to our knowledge by the ingenious and indefatigable Wichel, and several of his disciples) had only served to confirm the error, for the pains being only felt in one part of the abdomen, they could not convince, that the same disease produced the various symptoms, & the same disease, nor of pleuresy. All the diseases of the serous membranes were attributed to the same cause. As much may be said of the <sup>tumors</sup> Carcinoma, of which were mistaken for those of the brain and confounded with them.

In the inflammation of the testes, the tunica albuginea is frequently the only part first diseased, and the testis only secondarily and eventually. The perididymum can not be inflamed without

without breaking a dissection, in all the vessels  
 covered by it, they corresponding in a way which  
 is peculiar to them, with this inflammation.  
 The phenomena of continuity and contiguity, seen  
 in few diseases so obvious as in this. It is obser-  
 ved, that the patient is subject to hiccups, pro-  
 duced by the irritation of the diaphragm, by  
 continuity, is vomiting by the irritation of  
 the stomach, communicated by the peritoneum  
 by continuity. — The intestinal tube is filled  
 with gas; the patient complains of a diffi-  
 culty of voiding the contents of the urinary blas-  
 -ter, from the irritation, by continuity, im-  
 -posed by the peritoneum, and the irritation is  
 sometimes so great, that a suppression both of the  
 urine and feces takes place. So great is the  
 irritation, that the liver does not always per-  
 form its functions. The intestinal tube being  
 motionless, can only discharge its contents, by  
 consultation

convulsions. Various other phenomena of irritability are observable. In the mucous membrane which lines the intestines, for instance, one grain of tartar emetic, introduced into the stomach of a healthy young man, which excites an inflammation, communicated by continuity by the oesophagus and mouth, causes hyperaemia and ends in death. The injection of irritating substances into the rectum often produces violent effects. A tobacco blister, thrust up the rectum, in the case of a strangulated hernia, produces death in a few hours. These two patients were under my care at the Hotel Dieu at Paris.

Sympathetic phenomena. ... These sympathetic phenomena, from the impossibility of accounting, for them, by any other cause than sympathy, constitute, what is called, the symptomatic fever of inflammation.



Physicians have not always been of the same opinion in respect to the sympathy between a local inflammation and the general phenomena of inflammation. Jelle, a German writer of reputation, doubted its existence; but most modern physiologists have since admitted it.

Fever does not solely consist in the disorder of the circulation; for it is evident, it would be incorrect to describe <sup>it</sup> wholly as an increased motion of the heart. It is a general state of the economy. Transpiration is sometimes diminished and then increased - the animal functions also undergo a change. It has the acute type, and is in proportion to the <sup>importance of the</sup> diseased part.

The extent and degree of the inflammation regulates that of the fever which is also increased, by pains and often exactly measures it. The paroxysm, for example is very considerable for the symptomatic fever at occasions. <sup>the</sup> Fever the, however, does not correspond to the importance of the disease; heart, for parts require much greater importance, do not cause so great a disorder

or is violent a symptomatic fever, which so often terminates in death.

We find that, once produced, inflammation passes through its different stages or periods, with the same regularity in each organ; and that it is independent, to the age, sex, temperament, idiosyncrasy &c. and even to the personnating cause, for the inflammation of the mucous membrane, which lines the canal of the ear, may be produced by other causes than the Typhoid.

Of the phlegmasia, some have a tendency to their seat, from one part to another, and not to pass through all the periods of inflammation, in the same part: this is the case with Erysipelas and Rheumatism, where we observe the inflammation of the muscles successively invading several parts with astonishing rapidity. The inflammation of the mucous membrane presents the same pheno-

When a part has been affected with an inflammation, it either resumes its natural state, or becomes the seat of another disease; evidently connected with the preceding, so that inflammation continues and becomes chronic; and this is a common occurrence.

When, at the close of a disease, the part resumes its natural state, which is done by slow degrees, this termination is called resolution. — When, instead of going through its different periods, it suddenly ceases, it is called effluence. — When, in consequence of inflammation, another disease appears in another part, metastasis. Authors of the highest antiquity were acquainted with this mode of termination, in inflammation. Metastasis has received different names, according to the substance of the part affected.

Metastasis is sometimes accompanied by violent crises, which is more common with the inflammation of internal parts, than with the disease of the great external vessels, and the crisis is the

return of the part to its natural functions, which will often cause a disorder manifest in the economy. Extern functions cannot return to their natural operations, without exciting mutual movements.

Inflammation may terminate by another disease, viz. Suppuration, Induration or Gangrene.

The most common is by suppuration, the pus appears as the formation of a flaccid, which in its natural state, malleable by the contact of air, as any extraneous body, is white, devoid of smell, of the fluidity or consistency of honey; this fluid is called pus. This is difficult to distinguish it from the mucus found in the membranes of the trachea in diseases of the Lungs.

The second termination is by isoruration. It takes place, when a part, which has recently been the seat of inflammation is enlarged, swollen and hard. It should not be confounded with a fistula, though the first degree of that isoruration. This termination does not happen so often in some parts, as in others. The Glandular are most liable to it.

Perhaps it might be said that it most commonly takes place in the secretory organs. It is no infrequent occurrence, to see a person, who, with all the appearance of regular health, has an indication of an enlarged lymphatic ganglion of the groin. They are often found on dissection, to be in a calcilagenous state.

Glands are often found to be in a state of ossification, when no disease has been discovered during life. I once found, while dissecting in one of the hospitals in Paris, several stony concretions in a gland pincers of a man who, during life, had manifested no morbid affections. The lymphatic glands and ganglia, when inflamed, almost always terminate in induration, - but a part that has been obstructed, often returns to its natural state, after a lapse of time.

Gangrene is the last termination: We are to consider it as a disease altogether distinct. It is thought to proceed from too great an intensity of inflammation. In that species which arises from the malignancy of the inflammation

inflammation (passive) are, frequently, very grievous, and  
 pain is most always precocious of it. - One species of  
 inflammation, can only terminate by suppuration. When  
 this termination is caused by the violence of inflammation  
 itself, commonly called, suppurative, it does not always suppu-  
 rate, it sometimes calms its violence, or is absorbed, or  
 goes on to suppuration. It is, perhaps, more to be feared, and more pro-  
 gressed, by the swelling of the cellular substance.

Acute inflammation is sometimes transformed into  
 a chronic disease, the duration of which is infinite.  
 Chronic inflammation has symptoms nearly different  
 from those of the acute. The only remaining symptom  
 of the acute is the redness of the part, and we can  
 neither discover, in the chronic, pain, tension or  
 swelling. It has its seat in some parts in preference  
 to others. - One of its characteristics is its tendency  
 to ulceration: this, we frequently remark, in the throat.  
 It sometimes produces a rotach, as others a little.  
 There is no ulceration in the gonorrhoea: but we  
 find it in blennorrhoea, when it has become chronic.  
 The serous and mucous membranes are the parts most

liable to it.

## Treatment of inflammation

It is much easier to prevent inflammation, than to stop its progress when it has once appeared. It is then necessary to assist its progress, and hasten its termination.

In some species, internal means are the only ones to be employed. Croup, depending on a foul state of the first passages, requires vomiting and purging, without any topical application which is useless & often dangerous, though some physicians have recommended it. In the case of croup, depending upon the foul state of the first passages, the same treatment. But in croup, depending upon the foul state of the first passages, the same treatment. But in croup, depending upon the foul state of the first passages, the same treatment.

(\*) Professor & his boy applies very poisonous substances: how far he has been successful. I cannot say. Professor & his boy also, injects the joint with some warm solution such as that of opium & honey. I cannot affirm that this practice was approved. *quod uno vult efficitur in toto, laetatur*

where a tendency to suppuration exists be prevented. ~~unsu~~gent applications of oil of turpentine or other substances, will most commonly produce this effect.

The great, local and proximate cause of which are still undiscovered, affects the articulations spontaneously, and, being capable of retrocession, may cause an inflammation of the viscera of the thorax and abdomen, the progress of which are rapid & promptly fatal. It should also be treated by internal remedies. Professor Barson recommends ipecac and has been successful. External applications, such as that of mustard, irritant frictions and blisters on the limb and chest, have frequently been attended with success. When the inflammation is violent, either general or local, will often be fatal. The good effects of local bleed-



which my limited experience has afforded me the means of observing have often suggested the query, why it was not more generally practised, for in many cases, nature herself seems to indicate it. It is observed that, after the operation of Lithotomy, when the patient has a hæmorrhage, he most commonly recovers, if it has not been so copious, as to produce mortal debility, or some other bad effect. The application of leeches which is so safe, seems to claim a preference in most cases. Cupping and Scarifications have also been used with advantage, to allay the violence of inflammation.

Several authors have recommended the opening of the vein, under the tongue, to check the progress of inflammation. This mode of local depletion, now fallen into disuse, has often produced the best effects: In two cases where suffocation was threatened, I saw it opened with the best & promptest results.

Plasters have also been recommended. D<sup>r</sup> Petet of  
 Lyons, informs us, that he has used them in these cases  
 with success; he does not however shew the habit of apply-  
 -ing them on the apex of the Phlegmon & Erysipelas.  
 (It could only be sub-cutaneous phlegmon). We derive  
 for the good effects of Plasters, in the inflammation of the  
 Pleura, the Lung or the Conjunction. Chronic infla-  
 -mations have not infrequently been cured by this appli-  
 -cation, from the principle of Hippocrates, that *Ductus  
 doloribus simul obortis, vehementior observat alterius*.  
 It has been observed that the cure of fractures, with un-  
 -dermined wounds, was commonly unattended with difficulties;  
 this may be accounted for, by the number of inflammations  
 which necessarily take place in such a case, and which  
 act upon the above principle of the Crack of Ice.  
 Narcotic applications, both in poultices of such as the  
 Cataplasma of Sydenham, and in Fomentations as the  
 decoction of the poppy are used to allay the pain, and  
 -but inflammations and cancerous swellings.  
 Tonics and astringents have been found useful in some

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cases, particularly where the vessels distended with  
blood had not time sufficient to react and empty them-  
selves. But the judgment of the experienced  
Practitioner is the best rule, in the treatment of  
inflammation.

*Medicina brevis occasionem habet; et qui hoc novit, illi data acarta  
habet, et recte quae bona sunt, et quae non dona. —*

*Thy secret. de l'écrit en homine, Cap. XV. —*

